



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/589,377

08/14/2006

Daniel J. Arriola

63558D

7109

109 7590 09/21/2009

The Dow Chemical Company
Intellectual Property Section
P.O. Box 1967
Midland, MI 48641-1967

EXAMINER

LENIHAN, JEFFREY S

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

09/21/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/589,377	ARRIOLA ET AL.	
	Examiner	Art Unit	
	Jeffrey Lenihan	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-27 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-7, drawn to a catalyst composition for use in the preparation of multi-block copolymers.

Group II, claim(s) 8, drawn to a process of making a multi-block copolymer.

Group III, claim(s) 9-25 and 27, drawn to a multi-block copolymer and article comprising the same.

Group IV, claim(s) 26, drawn to a cross-linked derivative of a multi-block copolymer.

As stated above, claim 7 has been included in Group I. As currently written, claim 7 recites “[A] composition according to claim 8;” however, the examiner notes that claim 7 cannot properly depend from claim 8 because 1) dependent claims are required to refer back to and further limit preceding claims; and 2) claim 8 recites a process, not a composition. The examiner has therefore interpreted the reference to claim 8 to be a typographical error and has treated claim 7 as depending from claim 1, which recites a composition, for the purpose of preparing this restriction requirement.

2. The inventions listed as Groups I-IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The invention as

Art Unit: 1796

claimed in independent claim 1 does not define a special technical feature distinguishing the claimed invention over the prior art. Independent claim 1 recites a composition for use in the preparation of multi-block copolymers comprising the admixture product of (A) a first olefin polymerization catalyst, (B) a second olefin polymerization catalyst capable of producing polymers having different chemical or physical properties than the polymer produced by (A), and (C) a chain shuttling agent. The composition as claimed in claim 1 is fully anticipated by, for example, the disclosure of Przybyla et al, Acta Polym. Vol. 50 pages 77-83 (1999). Przybyla discloses a catalyst composition comprising the 1) $\text{rac-Me}_2\text{Si}[\text{Ind}]_2\text{ZrCl}_2$, which catalyzes the polymerization of isotactic polypropylene and corresponds to claimed component (A); 2) $i\text{-Pr}[\text{FluCp}]\text{-ZrCl}_2$, which catalyzes the polymerization of syndiotactic polypropylene and corresponds to claimed component (B); and 3) a trialkylaluminum agent such as triisobutylaluminum or triethylaluminum (abstract; sections 2.2-2.4), both of which are recited by applicant to be embodiments of claimed component (C) (see specification page 22, lines 16-18).

3. As the catalyst composition of Przybyla contains all of the claimed elements of the claimed composition, the composition recited in claim 1 does not make a contribution over the prior art. Unity of invention is therefore found to be lacking and restriction is appropriate.

4. This application contains claims directed to more than one species of the invention of Group III. These species are deemed to lack unity of invention because

Art Unit: 1796

they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

Species 1: Claim 9 recites a multi-block copolymer wherein two or more blocks differ in terms of comonomer content, crystallinity, density, melting point, or glass transition temperature. Applicant is required to elect a species of property by which the blocks differ from one another.

Species 2: Range for the delta quantity, of the multi-block copolymer, such that the delta quantity is greater than y^* , defined by a claimed equation (claim 11), or greater than 48 °C (claim 13). The examiner notes that when the maximum value for the equation of claim 11 is solved using the maximum allowable value for the heat of fusion, the answer is less than 48.

Species 3: Range of heat of fusion, H_f , of the multi-block copolymer, such that H_f is up to 130 J/g (claim 11), ≥ 130 J/g (claim 13), or less than 85 J/g (claim 15).

Species 4: Range for the storage modulus, G' , of the multi-block copolymer, such that $\log(G')$ is ≥ 0.4 MPa (claims 22, 23) or ≥ 1 MPa (claims 24, 25).

If the invention of Group III is elected for prosecution, applicant is required, in reply to this action, to elect a single embodiment for EACH of Species 1, 2, 3, and 4 to which the claims shall be restricted if no generic claim is finally held to be allowable. Applicant is further required to ensure that the elected species do not conflict with one another. The reply must also identify the claims readable on the elected species,

Art Unit: 1796

including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

5. The claims are deemed to correspond to the species listed above in the following manner:

See above.

The following claim(s) are generic: As the claims are all written in product-by-process format and depend from a process claim, there is no apparent claim that is generic for each of the species.

6. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: The invention as claimed in independent claim 1 does not define a special technical feature distinguishing the claimed invention over the prior art. (see above).

7. Because this requirement is complex, a response was not solicited by telephone.

8. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

9. The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does

Art Unit: 1796

not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

10. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Lenihan whose telephone number is (571)270-5452. The examiner can normally be reached on Monday through Thursday from 7:30-5:00 PM, and on alternate Fridays from 7:30-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/
Primary Examiner, Art Unit 1796

Jeffrey Lenihan
Examiner, Art Unit 1796

/JL/